

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Proposed Designation of Critical Habitat for the Endangered Maryland Darter

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; critical habitat for the Maryland darter.

SUMMARY: The Service proposes to designate Critical Habitat for the Maryland darter (*Etheostoma sellare*). Self-sustaining populations of this fish species are now believed to exist only in two small segments of streams in Harford County, Maryland. The Maryland darter was listed as Endangered on March 11, 1967 (32 FR 4001, and is protected under the provisions of the Endangered Species Act of 1973. Its Critical Habitat has not been determined, pending study of its habitat needs by the Maryland Darter Recovery Team and review by the Service of recovery team findings. An earlier proposal in 1978 (43 FR 20518) was withdrawn by the Service (44 FR 12382). The proposed rule would identify habitat subject to Federal agency consultation pursuant to Section 7(a) of the Act. Comments and data related to this proposal are solicited.

DATES: Comments on this proposed rule must be submitted by November 26, 1980. Public meetings on this proposal will be held at 7:00 PM on Tuesday, September 30, 1980, at Dickson Hall, Building 3074, Raritan Avenue, Aberdeen Proving Ground, Maryland.

ADDRESSES: Interested persons or organizations are requested to submit comments to Director (OES), U.S. Fish and Wildlife Service, Department of the Interior, Washington, D.C. 20240. Comments and materials relating to this rule are available for public inspection by appointment during normal business hours at the Service's Office of Endangered Species, Suite 500, 1000 North Glebe Road, Arlington, Virginia. The public meeting will be held at Dickson Hall, Building 3074, Raritan Avenue, Aberdeen Proving Ground, Maryland.

FOR FURTHER INFORMATION CONTACT: For further information on the proposed rule contact Mr. John L. Spinks, Jr. Chief, Office of Endangered Species (703/235-2771).

SUPPLEMENTARY INFORMATION
Background

The Maryland darter is a small fish of the freshwater perch family, which, in addition to darters, includes the larger and better known yellow perch and walleyed pike. Like many other darters, Maryland darters evidently inhabit rock crevices and similar shelters in clean, well-oxygenated, swiftly flowing parts of streams, the riffle habitat. Like most darters, they remain usually on or near the bottom, where they dart quickly from shelter to shelter, hence their name. Exact life history details have been difficult to obtain for this rare species; related species survive poorly and often fail to reproduce if confined to still water, or even in flowing streams where bottom crevice shelters have been eliminated by siltation. Darters feed mostly on small riffle insects and other invertebrates with habitat requirements similar to their own.

This species was described in 1913, from two individuals collected the year before in the vicinity of Havre de Grace, Maryland. The original collection locality was listed as Swan Creek, from a long stony riffle which cannot be identified today. It might have been in a small eastern tributary now known as Gasheys Run, although the riffle as described would be more typical of Swan Creek. Intensive searches of Swan Creek by many biologists during subsequent years have never produced any specimens. This failure prompted Matthieson to list the species as probably extinct in his 1959 book "Wildlife in America."

A single juvenile Maryland darter found in Gasheys Run in 1962 stimulated renewed biological interest, resulting, in 1965, in discovery of an apparently self-sustaining population in the lower part of nearby Deer Creek, about six miles northwest of Havre de Grace. Current opinion of some biologists is that the 1962 Gasheys Run specimen, and one other taken there in 1965, could have been stragglers displaced down the Susquehanna River from the Deer Creek population, and that perhaps insufficient habitat now exists in Swan or Gasheys creeks to satisfy breeding requirements there.

Repeated collections in the middle and upper stretches of Deer Creek have also failed to yield any Maryland darters, even from several riffles that might otherwise be judged as suitable habitat for them. Perhaps habitat needs limit this species to base level parts of the stream, or perhaps other fish species have a competitive advantage in the upper reaches. Widespread survey collecting elsewhere in the region now indicates it is unlikely that other

breeding populations exist. Base level reaches of most other lower Susquehanna tributaries entered the river above Conowingo Dam and are now part of the reservoir, lacking riffles. Whether or not the Susquehanna main channel is or ever has been suitable habitat is debatable, but firm evidence either way is not yet available. Experimental approaches to learning exact habits of this fish are hampered by its extreme rarity, and by fears that removing individuals for test might have adverse or critical effects on population survival.

Deer Creek was designated a scenic river under the Maryland Wild and Scenic Rivers Act of 1968 by an act of the State Legislature in 1973.

A proposal to determine Critical Habitat for the Maryland darter was published in 1978 (43 FR 20518), but was subsequently withdrawn by the Service (44 FR 12382). This was in accordance with the Endangered Species Act Amendments of 1978, which substantially modified the procedures the Service must follow when designating Critical Habitat. The proposed rule will bring the Critical Habitat proposal into conformity with these amendments. Endangered status of the Maryland darter under the provisions of Section 4(a) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.) is not affected by this proposal to determine Critical Habitat.

Critical Habitat

The Act defines "Critical Habitat" to include (a) areas within the geographical area occupied by the species, at the time that the species is listed, which are essential to the conservation of the species and which may require special management considerations or protection; and (b) specific areas outside the geographic area occupied by the species at the time of listing, upon a determination by the Secretary that such areas are essential for the conservation of the species.

As specified in the rules for designating Critical Habitat (to be codified at 50 CFR Part 424, see 45 FR 13010), the Director shall consider in determining what areas are critical those physiological, behavioral, ecological and evolutionary requirements essential to the conservation of the species and which may require special management considerations. These requirements include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, rearing of offspring, germination or seed dispersal; and generally,

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distribution of listed species.

Each of the above five factors pertains to the Maryland darter as summarized below:

Based on data presently available, the proposed Deer Creek area appears to include sufficient area for individual and population growth and for normal behavior. Immature fish have been collected in the Gasheys Run area and it may support a breeding population. Riffle and pool areas in both streams provide habitat for aquatic insects and snails, the Maryland darter's food. Large gravel and cobbles in the streams provide cover for the Maryland darter. Although reproduction has not been observed directly, it is presumed to occur in these streams, since the fish have not been taken elsewhere. These streams are the only habitats known to represent the geographic distribution of the species.

Section 424.12(b) of 50 CFR further states that, when considering the designation of Critical Habitat, the Director shall focus on the biological or physical constituent elements within the defined area that are essential to the conservation of the species. Known primary constituent elements shall be listed with the Critical Habitat description. The following elements are known or believed to be constituent elements in the habitat of the Maryland darter:

1. Continuity and sufficiency of stream flow. Like most fishes, this one could not be expected to survive removal of all water from its habitat for more than a few minutes.

2. Permanence of riffle habitat. Like many other darters, this one shows evidence of permanent residence in the shallower, swifter segments of streams. Both reproduction and ultimately survival can reasonably be predicted to be adversely affected if the population is forced by low water into stagnant or even still pools for prolonged periods. This constraint probably holds also for most organisms that are the darter's natural food.

3. Pollution sensitivity. Coupled with most darter's preference for swift water is a high oxygen requirement, making darters among the first fishes to show respiratory stress and failure in any reduction of oxygen availability.

Selective mortality of darters in habitats subjected to various other kinds of pollution is also documented.

4. Presence and quality of cover. Darters inhabiting riffles are known to use crevices among stones, smaller pebbles, vegetation or trapped wood flotsam both for cover from their predators and for spawning and egg protection. They have been noted to disappear from riffles when silt deposition eliminated such crevices. Darter eggs have been shown to be particularly vulnerable to smothering by silt, so that even less siltation can normally be tolerated during the spawning season.

In 50 CFR § 424.12(c) the Director is required to identify significant activities which would affect an area considered for designation as Critical Habitat or be likely to be affected by the designation. It should be emphasized that Critical Habitat designation may not affect each of the activities listed below, as Critical Habitat designation only affects Federal agency activities, through Section 7 of the Act.

The Service has not been notified of specific Federal activities or federally authorized actions that may be affected by the proposed Critical Habitat designation. Construction of dams or other structures traversing Deer Creek would require Federal authorization. Direct impoundment of the stream segment designated below would almost certainly destroy the Maryland darter population. Impoundments upstream could bring some or all of the water removal factors listed below into consideration.

Other types of non-federal activities can go forward freely in the proposed Critical Habitat area, even though they may adversely affect the area. The following specific activities could have adverse impacts on the Critical Habitat of the Maryland darter:

1. Water removal. Adverse impacts related to removing stream water can be expected beyond certain maximum and/or minimum stream depths, discharge rates, and rates of water level change in the riffle areas, with sharp increase in impact beyond the threshold limits. Since the darter seeks shelter under stones in shallow riffles, they are more vulnerable than most other fishes to sudden water level changes associated with onset or cessation of water removal: through stranding, being crushed by shifting stones, and other hydrologic changes. Seasonal changes in water depth sensitivity are also probable, related to the effects of flow rate on water temperature in very hot or cold weather, and to spawning.

2. Introduction of chemicals, organic waste matter or silt. Special sensitivities of darters to these factors have been suggested by work on other species (see above).

Because many such activities are not Federal activities *per se*, or federally authorized actions, they will not be affected by the Critical Habitat designation. Critical Habitat for the Maryland darter is as follows:

The riffle zones of Deer Creek downstream from its confluence with Elbow Branch, including adjacent pool areas which may be necessary nursery and/or food supply zones. The designated segment extends from approximately one half mile upstream from the Stafford Bridge. Across Deer Creek to approximately one mile downstream from Stafford Bridge. The area in Gasheys Run (also known as Gasheys Creek) includes both forks from their crossing of Penn Central Railroad to the confluence with Swan Creek.

The Service is required to consider economic and other impacts of specifying a particular area as Critical Habitat. The Service has prepared a draft impact analysis. The Service is notifying Federal agencies that may have jurisdiction over the land and water under consideration of this proposed action. These Federal agencies and other interested persons or organizations are requested to submit information on economic or other impacts of this proposed action (see below).

The Service will prepare a final impact analysis prior to the time of preparing a final rule, and will use this document as the basis for its decision as to whether or not to exclude any area from Critical Habitat for the Maryland darter.

Effect of this Proposal if Published as a Final Rule

Section 7(a) of the Act provides (in part):

(1) The secretary shall review other programs administered by him and utilize such programs in furtherance of the Act. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of Endangered species and Threatened species listed pursuant to Section 4 of this Act.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') is not likely to jeopardize the continued existence of any Endangered species or Threatened species or result in the destruction or adverse

modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to Subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

If published as a final rule this proposal would require Federal agencies not only to insure that activities they authorize, fund or carry out are not likely to jeopardize the continued existence of the Maryland darter, but also requires them to insure their actions are not likely to result in the destruction or adverse modification of this Critical Habitat which has been determined by the Director (who is authorized to make such designations on behalf of the Secretary). Provisions for Interagency Cooperation are codified at 50 CFR Part 402.

Sources

- Harford County Advisory Board and Maryland Department of Natural Resources. 1979. Deer Creek Scenic River, Revised Edition. Md. Dept. Natural Resources, Annapolis, 68 pp., 8 maps.
- Knapp, L. 1976. Redescription, relationships and status of the Maryland darter, *Etheostoma sellare* (Radcliffe and Welsh), an endangered species. Proc. Biol. Soc. Washington 89(6):99-117.
- Knapp, L., W. J. Richards, R. V. Miller and N. R. Foster. 1983. Rediscovery of the percid fish *Etheostoma sellare* (Radcliffe and Welsh). Copeia 1983(2):455.
- Radcliffe, L., and W. W. Welsh. 1913. Description of a new darter from Maryland. Bull. U.S. Bur. Fish. 32(1912):29-32.

Public Comments Solicited

The Director intends that the rules finally adopted will be as accurate and effective as possible in the conservation of this Endangered species. Therefore, any comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, private interests, or any other interested party concerning any aspect of these proposed rules are hereby solicited. Comments particularly are sought concerning:

- (1) Biological, commercial, or other relevant data concerning any threat (or the lack thereof) to the species or the habitat included in this proposal;
- (2) The location of and the reasons why any habitat of this species should or should not be determined to be Critical Habitat as provided for by Section 7 of the Act;

(3) Additional information concerning the range and distribution of this species;

(4) Current or planned activities which may adversely affect the subject areas which are being considered for Critical Habitat; and

(5) The foreseeable economic and other impacts of the Critical Habitat designation on federally funded or authorized projects.

Public Meetings

The Service hereby announces that a public meeting will be held on this proposed rule. The public is invited to attend this meeting and to present opinions and information on the proposal. Specific information relating to the public meeting is set out below:

Place: Dickson Hall, Building 3074, Raritan Ave., Aberdeen Proving Ground, Maryland.
Date: Tuesday, September 30, 1980.
Time: 7:00 PM.

National Environmental Policy Act

A draft environmental assessment has been prepared in conjunction with this proposal. It is on file in the Service's Office of Endangered Species, 1000 North Glebe Road, Arlington, Virginia, and may be examined by appointment during regular business hours. A determination will be made at the time of final rulemaking as to whether this is a major Federal action which would significantly affect the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 and 40 CFR 1500-1506.

Primary Author

The primary author of this proposed rule is Dr. George E. Drewry, Office of Endangered Species, Arlington, Virginia (703/235-1975).

Regulations Promulgation

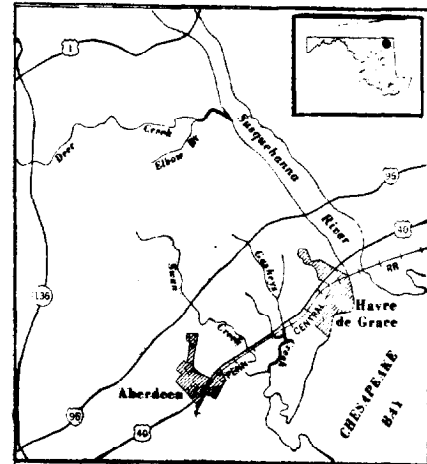
Accordingly, it is hereby proposed to amend Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, as set forth below:

1. It is proposed that § 17.95(e) Fishes be amended by adding Critical Habitat of the Maryland darter after that of the leopard darter as follows:

Maryland (Harford County): (1) Deer Creek main channel from the junction with Elbow branch thence downstream to the junction with the Susquehanna River. (2) Gasheys Run (also known as Gasheys Creek) main channels of east and west forks from their intersections

with Penn Central Railroad south to their confluence, thence south to the confluence with Swan Creek.

Maryland Darter
Harford County, Md.



Primary constituent elements of this habitat are considered to be quality and permanence of streamflow in shallow areas of the streams (riffles), and presence of unsilted rocky crevices for shelter.

Dated: August 8, 1980.

F. Eugene Heester,
Acting Director, Fish and Wildlife Service.

[FR Doc. 80-26317 Filed 8-27-80; 8:45 am]

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